



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/921,614

08/03/2001

Feng Lin

MTI-31271

7504

31870

7590

01/12/2004

WHYTE HIRSCHBOECK DUDEK S.C.  
555 EAST WELLS STREET  
SUITE 1900  
MILWAUKEE, WI 53202

EXAMINER

NGUYEN, MINH T

ART UNIT

PAPER NUMBER

2816

DATE MAILED: 01/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/921,614

Applicant(s)

LIN, FENG

Examiner

Minh Nguyen

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30, 34 and 76-81 is/are pending in the application.
- 4a) Of the above claim(s) 76-81 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-12 is/are allowed.
- 6) ☒ Claim(s) 13-30 and 34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Applicant's amendment filed on 10/23/03 has been received and entered. Claims 1-30, 34 and 76-81 are pending. The amendment and argument presented therein overcome the objections and some of the rejections, these are withdrawn. New grounds of rejections necessitated by the amendment are set forth below. This action is FINAL.

#### ***Election/Restrictions***

2. Newly submitted claims 76-81 are directed to distinct species from the invention originally claimed for the following reasons:

Species I: a system which does not require any decoder or multiplexers between the phase detector and the SMD.

Species II: a system which requires at least one of a decoder and multiplexers between the phase detector and the SMD.

Species III: a system which requires a decoder and multiplexers between the phase detector and the SMD.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 76-81 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 13-30 and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 13, the claim is indefinite because it does not have any element and/or structural to support the functional limitation “to reduce the number of the delay stages the selected signal passing through” recited on the last line. As disclosed, in order for the device to be able to reduce the number of the delay stages the selected signal passes through in the SMD, the device must have a “means to receive the signals” CIN and CIN’ and a “means to select the signals” from said means to receive the signals a selected signal based on one of the plurality of conditions outputted from the phase detector, and these means provide a selected signal to satisfy the recited condition which is the number of delay stages is reduced, however, neither of these means are recited in the claim. The claim is further indefinite because it is unclear whether the number of delay stages is included in the phase detector or is included in the SMD, or it is another element in the memory device. If it is another element in the memory device, the claim is further rejected because of the lacking of structural relationship between the number of delay stages and the rest of the elements in the memory device.

As per claims 14-17, these claims are rejected for the same reasons noted in claim 13.

As per claim 18, this claim is rejected for the same reasons noted in claim 13.

Art Unit: 2816

As per claim 19, the recitation the input buffer produces a clock delay signal (CLDY) is misdescriptive because of as shown in Fig. 1 of the present invention, the input buffer 18 does not produce the clock delay signal CDLY as recited. The recitation "a selected signal to pass through the circuit" on the last two lines is confusing, i.e., it is unclear if "a selected signal" is one of the CIN, CIN' and CDLY signals, or some other signal. The recitation "pass through the circuit" is unclear, it is unclear if it means the selected signal must be passed through the input buffer, the SMD and the phase detector. The phrase "the external clock signal" recited on line 3 should be changed to -- an external clock signal -- to avoid potential antecedent basis problem.

As per claims 20-22, these claims are rejected for the same reasons noted in claim 19.

As per claims 23-25, these claims are rejected for the same reasons noted in claims 13, 16 and 14, respectively.

As per claim 26, the claim is indefinite because the structural relationship between the phase detection and selection circuit with the other elements is unclear and confusing, i.e., the claim fails to particular point out and distinctly claim the structural relationship between the logic and the phase detection and selection circuit. The claim is further indefinite because it is unclear whether the number of delay stages is included in the phase detector or is included in the SMD, or is included in the logic, or is included in the phase detection and selection circuit, or it is another element in the system. If it is another element in the system, the claim is further rejected because of the lacking of structural relationship between the number of delay stages and the rest of the elements in the system.

As per claims 27-30, these claims are rejected for the same reasons noted in claim 19.

As per claim 34, the functional recitation on the last four lines does not have any elements and/or structure to support.

***Response to Arguments***

4. Applicant's arguments filed on 10/23/03 have been fully considered but they are not persuasive.

Regarding the argument specific elements such that decoders and multiplexers are not required. This argument is moot since the rejections based on this ground are withdrawn. However, the argument provides ground for restriction/election requirement because the addition of these specific elements with specific relationships in the system are seen as distinct embodiments, i.e. different species.

***Allowable Subject Matter***

5. Claims 1-12 are allowed for the reasons noted in the previous Office action.

***Conclusion***

6. Claims 13-30 and 34, due to the serious indefiniteness problems noted herein above, and it is unclear how these claims will be amended, patentability of these claims cannot be identified in this Office action.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2816

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Nguyen whose telephone number is 703-306-9179. The examiner can normally be reached on Monday, Tuesday, Thursday, Friday 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 703-308-4876. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9318.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



1/9/04

Minh Nguyen  
Primary Examiner  
Art Unit 2816